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A REVISION OF THE MALAYAN SPECIES OF *TAJURIA* MRE. (LEPIDOPTERA: LYCAENIDAE)

By A. Steven Corbet, D.Sc., Ph.D., F.I.C.
British Museum (Natural History).

With Plate 1 and 27 Figures in the Text.

Manuscript received 20.vii.1939.

(Read 7th February, 1940.)

Fruhstorfer (1911, *Berlin. ent. Z.* **56** : 209–215) revised the genus *Tajuria* Mre. and described several new races, and his revision formed the basis of the monograph by Seitz (1926, *Grossschmett. Erde* **9** : 972–977). With both these authors, many subspecies were incorrectly allocated. The Indian species were dealt with by Evans (1932, *Ident. Ind. Butt.* : 281–285) and the Javanese species were listed by Toxopeus (1929, *Tijd. Ent.* **72** : 224–225).

The *Tajuria* species have been separated into a number of genera, but few of these divisions can be maintained when the group is considered as a whole. *T. jangala* and *T. donatana* might be separated on the long third segment of the palpi, but *T. megistia*, in which the third segment is short as usual, is closely related to the latter species. The synonymy of the genus appears to be as follows :—

Tajuria Moore, 1881, *Lep. Ceylon* **1** : 108 (Type = *Hesperia longinus* Fab.).
Cophanta Moore, 1884, *J. Asiat. Soc. Bengal* **53** : 35 (Type = *Iolaus illurgis* Hew.).
Remelana Moore, 1884, *loc. cit.* : 37 (Type = *Amblypodia jangala* Hsf.).
Ops de Nicéville, 1895, *J. Bombay nat. Hist. Soc.* **9** : 296 (Type = *Ops ogyges* Nic.).
Britomartis de Nicéville, 1895, *loc. cit.* : 304 (Type = *Camena cleoboides* El.).
Creusa de Nicéville, 1896, *J. Bombay nat. Hist. Soc.* **10** : 176 (Type = *Creusa culta* Nic.).
Bullis de Nicéville, 1897, *J. Asiat. Soc. Bengal* **66** : 558 (Type = *Britomartis buto* Nic.).

In each case, the genotype was selected by the author of the genus.

The females of *Pratapa* Mre. and *Tajuria* cannot be separated on structural characters, but usually the former are darker and have the fore-wing termen more rounded than the *Tajuria* females with which they are liable to be confused; in the *Pratapa* females, veins 2 and 3 on the fore-wing above are dark dusted on the blue ground, which is not the case with the corresponding *Tajuria* females. In order to facilitate the determination of females of this group, it may be mentioned that Malaysian *Pratapa ctesia* (Hew.), *blanka* (Nic.), *deva* (Mre.), and *icetoides* (El.) have vein 9 on the fore-wing long, with its origin at the post-discal band; this vein is usually long in *icetas* (Hew.), and is variable in *cleobis* (Godt.) and *queda* Cbt. (pl. 1, Fig. 23, ♂, 24 ♀). As was found to be the case with the genus *Pratapa* (Corbet, 1938, *Proc. R. ent. Soc.* (B) **7** : 166), compared with the Indian species of *Tajuria*, the Malaysian representatives are characterised by the greatly extended orange area in the tornus of the hind-wing beneath, and there is little tendency towards separation into geographical races in Neomalaya. The Javanese subspecies often show a slight whitening of the submarginal areas on the underside. Of the species found in the Malay Peninsula, *yajna*, *luculenta*, *illurgioides*, *ister*, *jalajala*, *elioti* and *stigmata* are known only from altitudes above 3000 feet, while *donatana*,

cippus, *deudorix*, *mantra*, *isaeus*, *dominus* and *buto* have been recorded only from the plains.

The original spelling of *luculentus* and *maculatus* has been altered in conformity with the International Code of Zoological Nomenclature.

The males of *cleoboides* and *stigmata* have prominent brands in the outer part of the fore-wing cell, and *mantra*, *deudorix*, *melastigma*, *cyrillus*, *iapyx*, *dominus* and *buto* have more or less prominent areas of specialised scales at or beyond the fore-wing cell. Other important characters in identifying *Tajuria* species are the position of the post-discal band on the fore-wing beneath, the extent of the orange area on the underside of the hind-wing, the relative size of the two black subtornal spots and the orange crowning on the black spot on the lobe of the hind-wing above.

Examination of the male genitalia.

With almost every species of *Tajuria*, the clasper and aedeagus are characteristic and the identity of a doubtful male can be decided immediately on dissection. Although there is a certain variation in the genitalia according to locality, this is usually slight throughout any one zoogeographical sub-region such as Malaysia. The case of *T. dominus*, where the form from Assam and Burma has a different clasper and aedeagus to that in Malaysia, has a parallel in *Pratapa penicilligera* (Nic.) (Corbet, 1938, *loc. cit.* : 167).

Key for the separation of the Malaysian species of *Tajuria* Mre.

(After each specific name is given the wing expanse, in millimetres, of the Malaysian representative. With *T. maculata* and *T. melastigma*, the measurements refer to Burmese specimens.)

1 (4). Palpi third segment long and thin.

jangala group.

2 (3). Un ochreous brown or purple-brown, with usual post-discal bands. *jangala* (♂♀ 30–34).
3. Un ochreous, no post-discal bands . . . . *donatana* (♂ 25–28, ♀ 27–29).
4. Palpi normal, third segment short.
5 (8). Un ochreous or ferruginous.

megistia group.

6 (7). Un ochreous, with narrow post-discal bands . *megistia* (♂ 25–28, ♀ 26).
7. Un ferruginous, with narrow post-discal bands prominently white-edged . . . . . *yajna* (♂ 25–27, ♀ 24–30).
8. Un not ochreous or ferruginous.
9(14). UnH with a black spot in space 7 internal to the post-discal band. Un white or greyish-white.

maculata group.

10(13). Un with usual post-discal bands, and bars at cell-ends.
11(12). UpF without a white discal patch or, at most, a small and obscure white patch in ♀ . . . . . *luculenta* (♂ 32, 33).
12. UpF with a prominent white discal patch . . . *illurgioides* (♀ 42).
13. Un abnormal, with large black spots and no post-discal bands. *maculata* (♂ 28–34, ♀ 36).

14. UnH without a spot in space 7 internal to post-discal band. Un some shade of grey or pale brown, except Javanese *diaeus*, which is white.
15(34). F v. 9 present.
16(31). F v. 9 long, origin at or before post-discal band.

cippus group.

17(18). Un post-discal band macular, comprising separated strigae. Un silvery grey in ♂, greyish white in ♀ . . *cippus* (♂ 29–34, ♀ 31–38).
18. Un post-discal band not macular, comprising conjoined strigae.
19(20). Un post-discal band straight on both wings, that on F very oblique. Un white in Javanese race, silvery grey in Indian subspecies. *diaeus* (♂ 29, ♀ 30–33).
20. Un post-discal band curved and more or less parallel to wing margins.
21(22). UnF base of costa ochreous . . . . . *ister* (♂ 26–27, ♀ 27–29).
22. UnF base of costa not ochreous.
23(26). UnF post-discal band midway between cell-end and termen.
24(25). UnH black subtornal spots almost equal: orange scaling broken, or almost broken, in space 1c . . . . *jalajala* (♂ 28–32, ♀ 31–35).
25. UnH black subtornal spot in space 2 distinctly larger than that in space 1b: orange scaling broadly continuous from space 2 to 1b. ♀ unknown . . . . . *sunia* (♂ 30).
26. UnF post-discal band nearer termen than cell-end.
27(30). Un hair brown. UnH post-discal band not conspicuously broken at v. 4.
28(29). ♂ upF basal half non-shining royal blue. ♀ upH space 6 mostly blue. *deudorix* (♂ 33–38, ♀ 33–39).
29. ♂ upF basal half shining green. ♀ upH blue only at base of space 6. *mantra* (♂ 31–34, ♀ 31–35).
30. Un buff brown, with a rosy hue. UnH post-discal band conspicuously broken at v. 4 . . . . . *melastigma* (♂ 33, ♀ 31–33).
31. F v. 9 short, origin well beyond post-discal band.

isaeus group.

32(33). UnH black subtornal spot in space 2 almost circular and much larger than that in space 1b . . . . . *isaeus* (♂ 25–29, ♀ 24–26).
33. UnH black subtornal spots almost equal, that in space 2 rather oval. *dominus* (♂ 23–28, ♀ 25–28).
34. F v. 9 absent.

cleoboides group.

35(41). UnH with black subtornal spot in space 2 at least twice as broad as that in space 1b.
36(39). Un post-discal bands rich ochreous brown.
37(38). UnF post-discal band rather oblique and directed proximally towards the costa. UnF post-discal band continued to v. 1 and the lower half of space 1b not conspicuously whitened. ♂ upF basal third blue as usual . . . . . *buto* (♂ 26–28, ♀ 29).
38. UnF post-discal band exactly parallel to the termen throughout its length. UnF post-discal band terminating in the middle of space 1b and the lower half of space 1b conspicuously whitened. ♂ upF basal third with a fawn-coloured area of specialised scales. *elioti* (♂ 32–33, ♀ 32).
39. Un post-discal bands dark greyish-brown.
40. UpH black spot on lobe not orange crowned. Length of F above 13 mm. . . . . *stigmata* (♂ 20, ♀ 27–33).

41. UnH with black subtornal spot in space 2 only slightly larger than that in space 1b.
42. UpH black spot in lobe broadly crowned with orange. Length F below 13 mm. . . . . *cleoboides* (♂ 19–23, ♀ 20–23).

Males of *stigmata* and *cleoboides* have, on the fore-wing, a large circular patch of specialised scales, and the females have space 6 on the hind-wing entirely blue, except for the black termen : in females of *buto* and *elioti*, this space is mostly blackened.

Tajuria jangala travana (Hew.).

Amblypodia jangala Horsfield, 1829, *Descr. Cat. Lep. E.I.C.* : 113 ; ♀, Java.
Myrina travana Hewitson, 1865, *Ill. diurn. Lep. Lyc.* : 38, pl. xvii, f. 59, 60 ♂ ; Sumatra.
Tajuria travana Distant, 1884, *Rhop. Malay.* : 246, pl. xxii, f. 4 ♀.
Remelana jangala travana Seitz, 1926, *Grossschmett. Erde* **9** : 977, pl. 146B c 3 ♂, 4 und.
Remelana jangala travana Corbet & Pendlebury, 1934, *Butt. Malay Penin.* : 200, pl. xiii, f. 190 ♂ und.

T. jangala occurs from Tibet and North India to China, and through Malaysia (including Nias and Palawan), and the Celebes, to the Philippines and the Lesser Sunda Islands. In Neomalaya (*i.e.* the Malay Peninsula, Sumatra and Borneo) and Nias, the male is deep shining purple in the basal halves of the wings, the female being duller purple : in Java, Bawean and Sumbawa, the upperside is normally dull brown in both sexes. The underside is a uniform hair brown in Malaysia, but in Java it is a richer purple-brown with the hind-wing tornal spots deep rusty red instead of black : in Sikkim, the Philippines and Celebes, the underside is more ochreous, and in the two latter localities, the hind-wing green scaling is yellower and more brilliant.

Malayan *T. jangala* is not separable from the Sumatran form : the remaining Malaysian subspecies are *huberta* (Fruh.), Borneo, *jangala* (Hsf.) (= *bella* (Fruh.)), Java (Piepers & Snellen, 1918, *Rhop. Java*, pl. xxvi, f. 154a ♂, b ♀), *baweana* (Fruh.), Bawean, and *centa* (Fruh.), Nias.

Tajuria donatana donatana Nic.

(pl. 1, fig. 22, ♀).

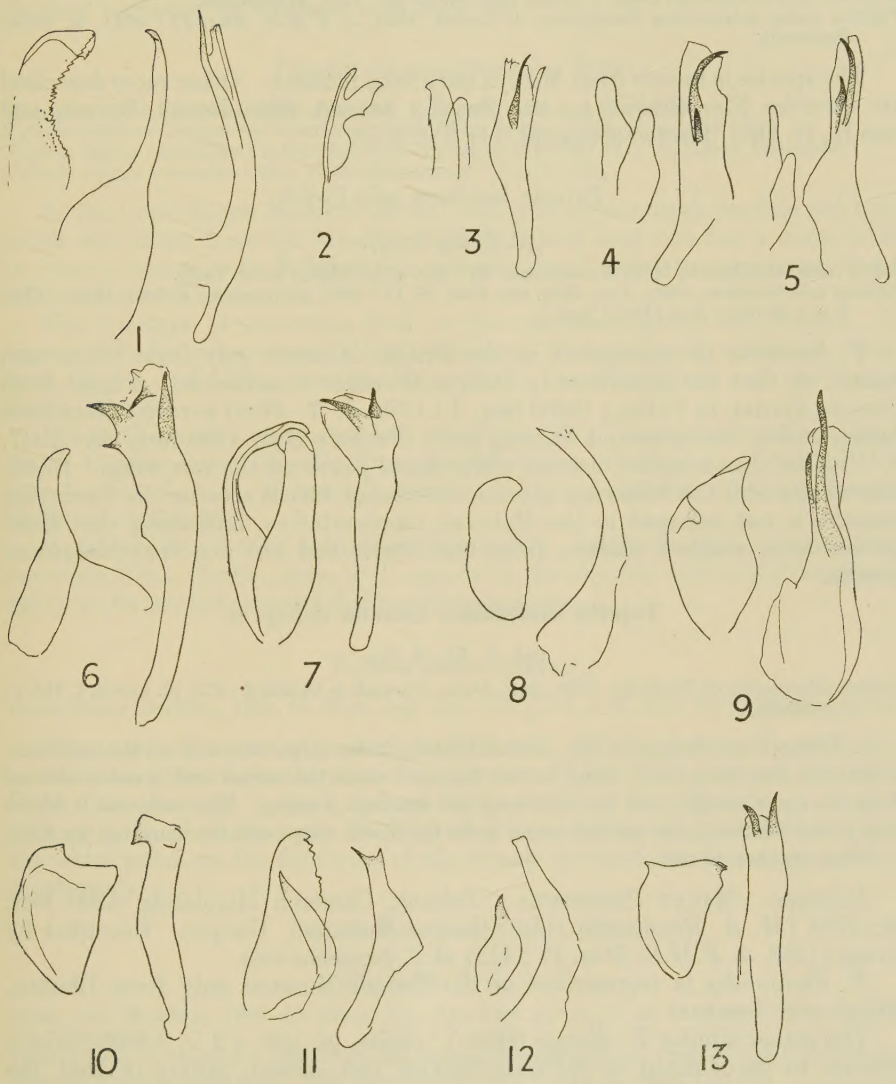
Tajuria donatana de Nicéville, 1888, *J. Asiat. Soc. Bengal* **57** : 287, pl. xiv, f. 15 ♂ ; Upper Tenasserim.
Tajuria donatana donatana Seitz, 1926, *Grossschmett. Erde* **9** : 976, pl. 146B 6 ♂.

The males of this rare species from Burma, Malaya, Sumatra and Borneo are not separable, and females from Malaya and Sumatra are similar. The Niasese race has been separated as *elaja* Fruh., although it hardly differs, and *bangueyana* Fruh., from Banguey Island, North Borneo, is unknown to me.

Tajuria megistia (Hew.).

Myrina megistia Hewitson, 1869, *Ill. diurn. Lep. Lyc. Suppl.* : 5, pl. iii, f. 77, 78 ♂ ; Habitat unknown (probably Assam).

The nominotypical form (Seitz, pl. 156 d 7 ♂, 8 und.) occurs in North India and Burma, and *thria* Nic., from Sumatra (Seitz, pl. 156 d 9 ♂), is the only race yet known from Malaysia.



FIGS. 1–13.—Male clasper and aedeagus of: (1) *Tajuria jangala travana* (Hew.), Malaya, (2) *T. donatana donatana* Nic., Malaya, (3) *T. megistia thria* Nic., Burma, (4) *T. yajna istroidea* Nic., Assam, (5) *T. yajna cato* H. H. Drc., Borneo, (6) *T. illurgis* (Hew.), Assam, (7) *T. illurgioides illurgioides* Nic., Assam, (8) *T. luculenta nela* Swinh., Malaya, (9) *T. maculata maculata* (Hew.), Burma, (10) *T. cippus maxentius* Fruh., Malaya, (11) *T. diaeus diaeus* (Hew.), Assam, (12) *T. ister ister* (Hew.), Assam, (13) *T. jehana jehana* Mre., Central India.

The aedeagus is not shown in fig. 2 and both claspers are shown in fig. 7. All drawings are of the same magnification, except that the aedeagus is somewhat reduced in figs. 1 and 9.

Tajuria yajna selangorana Pendl. & Cbt.

(pl. 1, fig. 1, ♀).

Remelana yajna Doherty, 1886, *J. Asiat. Soc. Bengal* **55** : 128; ♂, Kumaon.
Tajuria yajna selangorana Pendlebury & Corbet, 1933, *J. F.M.S. Mus.* **17** : 403; ♀, Malay Peninsula.

The species is known from Malaya only from females. Other races described are *istroidea* Nic., Sikkim (= *teza* Swinh., Assam), *ellisi* Evans, Burma, and *cato* H. H. Drc., Borneo (Seitz, pl. 147 2 ♂, 3 ♀).

Tajuria luculenta nela Swinh.

(pl. 1, fig. 2, ♂).

Iolaus luculentus Leech, 1890, *Entomologist* **23** : 38; ♂♀, China, Chang Yang.
Tajuria nela Swinhoe, 1896, *Ann. Mag. nat. Hist.* (6) **17** : 359; ♂♀, Assam, Jaintia Hills. (The ♀ is a *Pratapa deva* (Mre.) form.)

T. luculenta is represented in the British Museum only from China and Assam, so that its occurrence in Malaya is rather remarkable. A male from Gunong Perdah in Pahang (5000 feet, 4.i.1939, *J. N. Eliot*) hardly differs from Assam males, but a second Pahang male (Fraser's Hill, 4100 feet, 29.v.1937, *J. N. Eliot*) has a rather obscure white discal patch on the fore-wing. In the case of this and the following species, the orange tornal area on the hind-wing beneath is not enlarged in the Malayan representative, indicating that these species have reached Malaya from the North and are not true Malaysian insects.

Tajuria illurgioides taorana subsp. n.

(pl. 1, fig. 3, ♀).

Tajuria illurgioides de Nicéville, 1890, *Butt. India, Burmah & Ceylon* **3** : 375, pl. xxviii, f. 218 ♀; ♂♀, Sikkim.

♀. Differs from *illurgioides* Nic. ♀, from Sikkim, in the larger size and, on the *upperside*, in that the fore-wing black distal border does not reach the tornus and is not continued along the inner margin, and the hind-wing has less dark dusting. The *underside* is whiter than in the Sikkim ♀, the ground colour lacks the bluish tinge, and the markings are finer. Wing expanse 42 mm.

Holotype. Malay Peninsula: Pahang, Cameron Highlands, 4800 feet, 29.i.1924 (*M. A. Henderson*). In Selangor Museum. Unique. Recorded by Evans (1933, *J. F.M.S. Mus.* **17** : 412) as *T. luculenta nela*.

T. illurgioides is represented in the British Museum only from Bhutan, Sikkim and Assam.

The rather similar *T. illurgis* (Hew.) [1] (Seitz, pl. 156, a 2 ♀, 3 und.), which appears to be confined to Bhutan, Sikkim and Assam, differs in that the hind-wing beneath lacks the black spot in space 7 internal to the discal band and, on both wings, the cell-end spot comprises two, large, conjoined, round, black spots.

Tajuria maculata (Hew.).

Iolaus maculatus Hewitson, 1865, *Ill. diurn. Lep. Lyc.* : 47, pl. xxi, f. 29, 30 ♀; Silhet.

Typical *T. maculata* (Hew.) (= *albipicta* Fruh., Assam), (Seitz, pl. 156 b 1 ♂, 2 ♂ und., 3 ♀) occurs in Bhutan, Sikkim, Assam and Burma. The

[1] *Iolaus illurgis* Hewitson, 1869, *Ill. diurn. Lep. Lyc. Suppl.* : 10, pl. iv. f. 37, 38 ♂; Darjiling.

Bornean specimen recorded by H. H. Druce was denominated *nigella* by Fruhstorfer. The species has not yet been taken in Malaya but Mr. J. N. Eliot states that he has seen single examples in Pahang (Fraser's Hill and Gunong Terbakar) at altitudes over 4000 feet.

Tajuria cippus maxentius Fruh.

Hesperia cippus Fabricius, 1798, *Ent. Syst.* **5** (Suppl.) : 429; ♂, Tranquebar.
Tajuria longinus Distant *nec* Fabricius, 1884, *Rhop. Malay.* : 244, pl. xxiii, f. 20 ♀.
Tajuria cippus maxentius Fruhstorfer, 1911, *Berlin. ent. Z.* **56** : 211; ♀, Malay Peninsula.
Tajuria cippus maxentius Seitz, 1926, *Grossschmett. Erde* **9** : 972.

In the Copenhagen Museum are two males of *cippus*, both bearing red type labels and labels from the Museum Sehestedt, but only one has a name label in what is stated to be Fabricius' handwriting and this latter specimen has a locality label " Tranquebar."

The holotype of *maxentius* Fruh. is the specimen figured by Distant. *T. cippus* exhibits comparatively little variation throughout its extensive range from Ceylon and India, through Malaysia, to the Philippines and the Lesser Sunda Islands.

Other Malaysian subspecies are *vandeldeni* Tox., Sumatra, *moultoni* Tox., South Borneo, *bagas* (Kheil), Nias, *pseudolonginus* (Dbl.), Java (Seitz, pl. 155 h 3 ♂, 4 ♀; P. & S., pl. xxvi, f. 148a ♂, b ♀), and *theodosius* Fruh., Bawean (Seitz, pl. 155 h 5 ♀).

T. jehana Mre.,[2] with subspecies *jehana* Mre., Lucknow, and *ceylanica* Rly. (= *arida* Rly.), Ceylon, runs to *T. cippus* in the key but can be differentiated easily by its smaller size and duller colouring above.

Tajuria diaeus (Hew.).

Iolaus diaeus Hewitson, 1865, *Ill. diurn. Lep. Lyc.* : 45, pl. xx, f. 27, 28 ♂, 26 ♀; Northern India.

The species is known at present from Bhutan, Sikkim, Assam, Upper Burma and Java and the only subspecies described are *thydia* Tytler, Assam, and *dacia* H. H. Drc., Java (pl. 1, fig. 6, ♂, and Seitz, pl. 156, d 6 ♀; P. & S., pl. xxvi, f. 152a ♂, b ♀). In both sexes the hind-wing lobe is deep orange-red above, and the white patch on the fore-wing of the female increases in area on proceeding southwards.

Tajuria ister tussis H. H. Drc.

(pl. 1, fig. 4, ♂, 5, ♀).

Iolaus ister Hewitson, 1865, *Ill. diurn. Lep. Lyc.* : 43, pl. xix, f. 15, 16 ♂ *nec* " ♀ "; Burma, Moulmein.
Tajuria tussis H. H. Druce, 1895, *Proc. zool. Soc. Lond.* **1895** : 601, pl. xxxiii, f. 8 ♂, 9 ♀; Labuan.
Tajuria cleoboides tussis Seitz, 1926, *Grossschmett. Erde* **9** : 975, pl. 156 c 7 ♂, 8 ♀.

T. ister occurs in Assam, Burma, Malaya, Sumatra and Borneo, but it is only in Neomalaya that the fore-wing costa is coloured ochreous beneath. Females from Malaya and Sumatra (males are not known), differ from *tussis* female only in the bluer upperside. Females of *Tajuria ister* and *Pratapa icetoides* may be very similar in some localities (Malayan females of *P. icetoides* have broad, diffuse, black bordering on the upperside of both wings), but they can always be separated by the arrangement of the markings in the tornal area of the

[2] *Tajuria jehana* Moore, 1883, *Proc. zool. Soc. Lond.* **1883** : 529, pl. xlix, f. 7; ♂♀, Lucknow.

hind-wing beneath : in both sexes of the *Pratapa* species, there is an orange stripe in space 1b, internally bounded by a white stripe of the same width which, in turn, is inwardly defined by a dark brown line; in *T. ister*, this subtornal orange area extends broadly from space 3 to vein 1a, and the outer edges of the dark post-discal strigae in spaces 1b and 1c are only narrowly and irregularly shaded with white.

Tajuria jalajala larutensis Pendl.

(pl. 1, fig. 7, ♂, 8, ♀).

Myrina jalajala Felder & Felder, 1862, *Wien. ent. Monats.* **6** : 292; ♂, Luzon. Figured in *Reise Novara Rhopal.* pl. xxx, f. 7, 8 ♂.
Tajuria larutensis Pendlebury, 1933, *J. F.M.S. Mus.* **17** : 400; ♂ *nec* " ♀," Malay Peninsula.

T. jalajala, better known as *T. albiplaga*, is distributed from Bhutan and Sikkim, through Burma and Malaysia, to the Philippines. The male is brighter blue and the female larger and paler blue above in South Burma, Malaysia and the Philippines than in Bhutan, Sikkim and Assam. In the Philippine race, the post-discal band on the underside is moved towards the termen and outwardly broadly shaded with white. A characteristic feature of the species is the elongated orange stripe in space 1b on the hind-wing beneath.

The male of *larutensis* differs from *tura* Nic., from Java (type) and Sumatra (Seitz, pl. 156 d 5 ♂; P. & S., pl. xxvi, f. 145 ♂), in the broader black border on the fore-wing. Other races of *T. jalajala*, of which the nominotypical form is figured in Seitz, pl. 156 f 5 ♂, are *albiplaga* Nic., Sikkim, *pallescens* H. H. Drc., Assam, Jaintia Hills (= *drucei* Swinh; **syn. n.,** *sebonga* Tytler **syn. n.**), *thyia* Nic., Assam, Khasia Hills, and *berensis* H. H. Drc. (= *lucullus* H. H. Drc. **syn. n.**), Borneo (Seitz, pl. 147 c 7 ♂, d 1 und).

Tajuria sunia Moult.

(pl. 1, fig. 9, ♂).

Tajuria sunia Moulton, 1912, *J. Straits Br. R. Asiat. Soc.* **6** : 148, f. 7 ♂ *nec* " ♀ "; Sarawak.

This species is known only from the unique type. It resembles the male of *T. jalajala berensis* H. H. Drc., but the upperside is more of a purple-blue and the fore-wing black border is narrower. On the underside, the fore-wing post-discal fascia is very faint and the orange yellow area on the hind-wing is continuous.

Tajuria deudorix cyrus H. H. Drc.

Myrina deudorix Hewitson, 1869, *Ill. diurn. Lep. Lyc. Suppl.* : 2, pl. ii, f. 64, 65 ♂; Mindanao.
Tajuria cyrus H. H. Druce, 1895, *Proc. zool. Soc. Lond.* **1895** : 600, pl. xxxiii, f. 10 ♂, 11 ♀; Borneo, Kina Balu.
Tajuria mantra cyrus Seitz, 1926, *Grossschmett. Erde* **9** : 974, pl. 156 a 5 ♀ und., 6 ♀ *nec* " ♂."

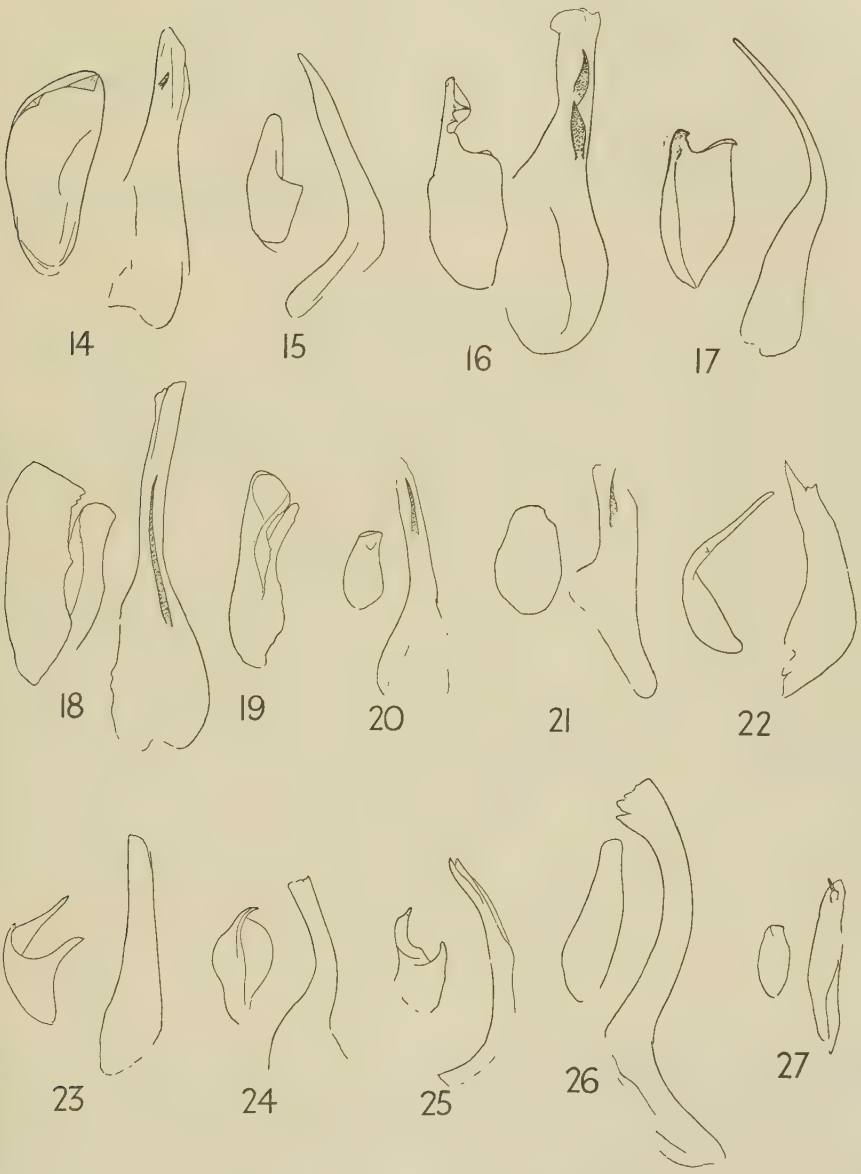
The species is distributed from Burma (*oeta* (Nic.)), through Neomalaya and Nias, to the Celebes and Philippines : in the last-named locality, the post-discal bands beneath are outwardly white-edged.

Tajuria deudorix verona subsp. n.

The form from Nias constitutes a new subspecies.

♂. *Upperside.* Resembles *cyrus* H. H. Drc. ♂, from Borneo.

Underside. Differs from *cyrus* in the broader and more regular post-discal bands and in the larger black subtornal spots and reduced orange area on the hind-wing.



FIGS. 14–27.—Male clasper and aedeagus of: (14) *Tajuria jalajala larutensis* Pendl., Malaya, (15) *T. sunia* Moult., Borneo, holotype, (16) *T. deudorix cyrus* H. H. Drc., Malaya, (17), *T. mantra mantra* (Feld.), Malaya, (18) *T. melastigma* Nic., Assam, (19) *T. cyrillus* (Hew.), Celebes, (20) *T. isaeus verna* subsp. n., Sumatra, (21) *T. iapyx* (Hew.), Celebes, (22) *T. dominus culta* (Nic.), Assam, (23) *T. dominus dominus* H. H. Drc., Malaya, (24) *T. buto cowani* subsp. n., Malaya, (25) *T. cleoboides viga* subsp. n., Malaya, (26) *T. stigmata* H. H. Drc., Malaya, (27) *T. elioti elioti* sp. n., Malaya.

The aedeagus is not shown in fig. 19. All drawings are of the same magnification.

Wing expanse 44 mm.

Holotype. Nias : Kalim Bungo, 1894 (*R. Mitscke*).

♀. *Upperside.* Differs from *cyrus* H. H. Drc. ♀, from Borneo, in the rather obscure submarginal black spots in spaces 1c, 2, 3 and 4 on the hind-wing, and in the larger black spot on the lobe.

Underside. Differs from *cyrus* ♀ in the same manner as the male.

Wing expanse 45 mm.

Allotype. Nias : Kalim Bungo, 1896 (*I. Z. Kannegieter*). Both types in British Museum, *ex* Coll. van de Poll and *ex* Coll. Adams.

Tajuria mantra mantra (Feld.).

Pseudolycaena mantra Felder & Felder, 1860, *Wien. ent. Monats.* **4** : 396; ♂♀, Malay Peninsula. Figured in *Reise Novara Rhopal.*, pl. xxx, f. 4 ♂ und.
Tajuria mantra Distant, 1884, *Rhop. Malay.* : 245, pl. xxi, f. 11 ♀.
Tajuria mantra mantra Seitz, 1926, *Grossschmett. Erde* **9** : 974, pl. 156 a 4 ♂ (as " *cyrus* ").

T. mantra occurs from Burma and Siam, through Malaysia (including Nias), to the Celebes and Philippines. In the last-named locality the post-discal band on the underside is moved towards the termen and outwardly whitened. In the Celebes, the male is deep blue and lacks the greenish scaling found in the Indo-Malayan and Philippine forms. In a female from Pulan Tioman (vi.–vii.1916, *H. C. Robinson & C. Boden Kloss*), the wings are basally more heavily overlaid with green than is usual in the form from the Malay Peninsula.

The subspecies which have been recognised in addition to the nominotypical form from Neomalaya are *ogyges* (Nic.), Tenasserim, *maroneia* Fruh., Nias (Seitz, pl. 156 b 6 ♂, 7 ♀), *mesambria* Fruh., Java (Seitz, pl. 156 4 ♂, 5 und.; P. & S., pl. xxvi, f. 146a ♂, b ♀), *jalysus* (Feld.), North Celebes (Seitz, pl. 156 c 1 ♂), *plateia* Fruh., South Celebes (Seitz, pl. 156 b 8 ♀ und.), *sapphirina* (Röb.), East Celebes, and *vergara* Sempr. (= *lucrosa* Fruh. **syn. n.**), Mindanao (Seitz, pl. 156 f 2 ♂, 3 ♀, 4 ♀ und.).

T. melastigma Nic.,[3] occurring in South India, Sikkim, Assam and Burma, is similar to *T. cyrillus* (Hew.[4]) (= *herculius* Fruh. **syn. n.**) (Seitz, pl. 156 e 4 ♂, 5 ♀ und.), which is confined to the Celebes, in both venation and male genitalia, but the two species differ distinctly in facies.

Tajuria isaeus verna subsp. n.

(pl. 1, fig. 10, ♂, 11, ♀).

Iolaus isaeus Hewitson, 1865, *Ill. diurn. Lep. Lyc.* : 44, pl. xix, f. 13, 14 ♂ : Sarawak.

In addition to the nominotypical form described from Borneo and Sumatra (Seitz, pl. 156 c 4 ♀ und., 5 ♀), subspecies have been described from Tenasserim (*tyro* Nic.) and Nias (*amardus* Fruh., Seitz., pl. 156 d 1 ♂ und., too dark). Hitherto, the distinct Malayan race has been referred to *relata* Dist., which is a form of *Pratapa deva* (Mre.).

♂. *Upperside.* As in *isaeus* (Hew.) ♂, from Sarawak, but the discal area of specialised

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[3] *Tajuria melastigma* de Nicéville, 1887, *Proc. zool. Soc. Lond.* **1887** : 460, pl. xl. f. 1 ♂; Sikkim.

[4] *Iolaus cyrillus* Hewitson, 1865, *Ill. diurn. Lep. Lyc.* : 46, pl. xx, f. 22, 23 ♂; 21 ♀; Macassar.

scales on the fore-wing is more extensive, and the basal half of the fore-wing and the basal third of the hind-wing are green dusted.

Underside as in *isaeus* ♂.

Wing expanse 31 mm.

Holotype. Malay Peninsula: Perak, i.–ii.1890 (*W. Doherty*). In British Museum, *ex* Coll. Elwes and *ex* Coll. Joicey.

♀. *Upperside.* Pale caerulean blue, without the green scaling and specialised area found in the male. The fore-wing black border is more evenly curved and small black submarginal spots are visible in spaces 1b, 1c, and 2 on the hind-wing.

Underside as in the male.

Wing expanse 26 mm.

Allotype. Malay Peninsula: Perak (*W. Doherty*). In British Museum, *ex* Coll. Oberthür.

Sumatran males have less green dusting at the wing bases but otherwise are similar to the Malayan form.

T. iapyx (Hew.) [5] from the Celebes, with which *massicus* Fruh. may be identical (Seitz, pl. 156 d 10 ♂, e 1 und., 2 ♂, 3 und.), resembles *T. isaeus* below, but the upperside is very different and vein 9 of the fore-wing is long.

Tajuria dominus dominus H. H. Drc.

(pl. 1, fig. 12, ♂, 13, ♀).

Tajuria dominus H. H. Druce, 1895, *Proc. zool. Soc. Lond.* **1895**: 600, pl. xxxiii, f. 12 ♂; Borneo, Kina Balu.

Tajuria dominus Seitz, 1926, *Grossschmett. Erde* **9**: 975, pl. 156 c 6 ♂.

The subspecies *culta* (Nic.), in Assam (type) and Burma, is hardly distinguishable from *dominus* from Malaya, Borneo and Nias in facies, although the genitalia of the two forms show constant differences. Although the species was hitherto unknown from Malaya, long series have been taken recently in Singapore by Messrs. J. N. Eliot and C. F. Cowan. The Javanese subspecies is *pisatis* Fruh. (P. & S., pl. xxvi, f. 147a ♂, b ♀).

Tajuria buto cowani subsp. n.

(pl. 1, fig. 14, ♂, 15, ♀).

Britomartis buto de Nicéville, 1896, *J. Bombay nat. Hist. Soc.* **9**: 308, pl. P, f. 41 ♂ *nec* "♀"; Tenasserim, Ataran Valley.

T. buto is a common species in Assam where it is represented by *valentia* Swinh., but is very rare in Burma, the Malay Peninsula, Sumatra and Nias. de Nicéville described *buto* from Tenasserim and North-east Sumatra, but his figure is evidently that of the Burmese form so that a name is required for the Malaysian race. Usually, the black spot in the lobe on the hind-wing above is not orange crowned in *T. buto*, but there may be a few orange scales in the female.

♂. *Upperside* as in *buto* (Nic.) ♂, from Burma. *Underside* differs from the Indian races in the more extensive orange area on the hind-wing.

Wing expanse 25·5 mm.

Holotype. Malay Peninsula: Singapore, 27.xii.1937 (*C. F. Cowan*).

[5] *Iolaus iapyx* Hewitson, 1865, *Ill. diurn. Lep. Lyc.*: 45, pl. xviii, f. 1, 2 ♂; Celebes.

♀. *Upperside* is clearer blue and lacks the purple tinge of *buto* ♀. *Underside* differs from *buto* as in the male.

Wing expanse 25 mm.

Allotype. Malay Peninsula: Singapore, 30.xii.1936 (*J. N. Eliot*). Both types in British Museum. Described from 2 males and 7 females.

Tajuria elioti sp. n.

(pl. 1, fig. 16, ♂, 17, ♀).

♂. Wing shape as in *T. buto cowani* ♂ from Malaya.

Upperside. Fore-wing pale sky-blue, with a yellowish-green hue in a side light. The black border extends from the base along the costa, entering the outer third of the cell, running down the discoidal and along vein 4 to within 3 mm. of the termen, and then to the tornus, reaching the inner margin 1 mm. from the termen. The basal two-thirds of the cell, three-fifths of space 1b, a very small area at the base of space 2 and a narrow strip of space 1a below vein 1 are clothed with fawn-coloured specialised scales. The hind-wing is shining royal blue, as in *cowani* ♂, with the black border a thread from the costa to the inner margin: in space 1b is a small black submarginal spot, dusted with metallic blue scales, and inwardly very narrowly crowned with orange. Spaces 1a and 1b whitened. The basal half of the hind-wing is sparsely clothed with long, white hairs. Fore-wing cilia black; hind-wing cilia black, outwardly whitened. Tails 3·5 mm. at vein 2, and 2 mm. at vein 1.

Underside. Grey, colour and markings exactly as in *T. buto cowani*, except that the fore-wing post-discal band is parallel to the termen throughout its length, and not directed slightly inwards towards the costa. On the fore-wing, the lower half of space 1a is conspicuously whitened, and the post-discal band terminates in this whitened area and before reaching vein 1. The hind-wing lacks the obscure, white submarginal lunules found in *T. buto*.

Body blue above and grey below. Antennae as in *T. buto*, except that the white rings are narrower.

Wing expanse 32 mm.

Holotype. Malay Peninsula: Pahang, Gunong Terbakar, 4500 feet, 31.xii.1938 (*J. N. Eliot*).

♀. *Upperside.* Resembles *T. buto cowani* ♀, but lacks the greenish hue and has the black spot on the lobe of the hind-wing narrowly, but distinctly, orange crowned. Cilia as in the male.

Underside. Brownish-grey, with markings as in the male.

Wing expanse 28 mm.

Allotype. Malay Peninsula: Selangor, Bukit Kutu, 1500 feet, 7.vi.1937 (*J. N. Eliot*). Both types in British Museum.

Tajuria elioti borneensis subsp. n.

♂. Differs from *elioti* ♂, from Malaya, in that the fore-wing black border is so broad that it surrounds the basal area of fawn-coloured scales, and it is only along the inner edge of this area that a few blue scales are visible.

Wing expanse 32 mm.

Holotype. Borneo: Kuching, 6.vi.1913. In British Museum, *ex* Coll. Hamilton Druce and *ex* Coll. Joicey.

Tajuria cleoboides viga subsp. n.

(pl. 1, fig. 20, ♂, 21, ♀).

Camena cleoboides Elwes, 1892, *Proc. zool. Soc. Lond.* **1892** : 637, pl. xliv, f. 4 ♂, 5 ♀; Burma, Karen Hills.

This species ranges from Sikkim, through Burma and Siam, to Malaysia (including Nias). The nominotypical form is figured in Seitz, pl. 156 d 2 ♂, and the Javanese subspecies *epigenes* Fruh. in Seitz, pl. 156 d 3 ♂, 4 ♀, and in P. & S., pl. xxvi, f. 157a ♂ (fig. 157b represents a Sumatran female).

♂. *Upperside* as in *epigenes* Fruh. ♂, from Java, except that the fore-wing black border is broader, and is convex towards the base in spaces 1b and 2 and not slightly concave as in *epigenes*. *Underside* as in *epigenes*.

Wing expanse 22 mm.

Holotype. North-East Sumatra : In British Museum *ex* Coll. Martin and *ex* Coll. Fruhstorfer.

♀. *Upperside* as in *epigenes* Fruh. ♀, from Java, except that the fore-wing black border is broader, and its inner edge is straight and not concave. *Underside* as in *epigenes*.

Wing expanse 22 mm.

Allotype. Sumatra. Siboga Expedition, ii.1903. In British Museum *ex* Coll. Oberthür.

Tajuria stigmata H. H. Drc.

(pl. 1, fig. 18, ♂, 19, ♀).

Tajuria stigmata H. H. Druce, 1904, *Ann. Mag. nat. Hist.* (7) **13** : 141 ; ♂♀, Borneo, Kina Balu.

Hitherto, this rather striking species has been known only from the type specimens from Borneo, but the Selangor Museum has a pair from Selangor (Bukit Kutu, 3400–3500 feet, ♂, viii.1915; ♀, 6.ix.1929, *H. M. Pendlebury*). The Bornean and Malayan males are similar, but the Malayan female is a pale chalky blue and not coloured as the male as is the Bornean female.

During the present investigation, the types of all the *Tajuria* forms mentioned have been examined except *bangueyana* Fruh., *cato* H. H. Drc., *cyrus* H. H. Drc., *dacia* H. H. Drc., *deudorix* Hew., *herculius* Fruh., *longinus* Fab., *lucrosa* Feld., *maxentius* Fruh., *nigilla* Fruh., *pallescens* H. H. Drc., and *tussis* H. H. Drc., and those forms described by Doubleday, Kheil, de Nicéville, Röber, Semper and Toxopeus. The types of *cippus* Fab. were examined in the Copenhagen Museum in 1933.

I am greatly indebted to Captains C. F. Cowan and J. N. Eliot, of the Royal Artillery, for the opportunity of examining their remarkably extensive collections of Malayan *Tajuria* which have formed the basis of the present investigation. Captains Cowan and Eliot have added 5 species to the Malayan list which, with 16 species, now exceeds the total number of *Tajuria* species recorded from any other country, Burma and Sumatra being next with 15 species each. To Mr. H. M. Pendlebury, Director of the Selangor Museum, I am again indebted for the loan of specimens.

Explanation of Plate 1.

Fig. 1. *Tajuria yajna selangorana* Pendl. & Cbt., ♀.
2. *T. luculenta nela* Swinh., ♂.
3. *T. illurgioides taorana* subsp. n., ♀ holotype.
4. *T. ister tussis* H. H. Drc.; ♂ (Pulau Laut.).
5. *T. ister tussis* H. H. Drc., ♀.
6. *T. diaeus dacia* H. H. Drc., ♂ (Java).
7. *T. jalajala larutensis* Pendl., ♂.
8. *T. jalajala larutensis* Pendl., ♀.
9. *T. sunia* Moult., ♂ holotype (Borneo).
10. *T. isaeus verna* subsp. n., ♂ holotype.
11. *T. isaeus verna* subsp. n., ♀ allotype.
12. *T. dominus dominus* H. H. Drc., ♂.
13. *T. dominus dominus* H. H. Drc., ♀.
14. *T. buto cowani* subsp. n., ♂.
15. *T. buto cowani* subsp. n., ♀ allotype.
16. *T. elioti* sp. n., ♂ holotype.
17. *T. elioti* sp. n., ♀ allotype.
18. *T. stigmata* H. H. Drc., ♂ holotype (Borneo).
19. *T. stigmata* H. H. Drc., ♀ allotype (Borneo).
20. *T. cleoboides viga* subsp. n., ♂ (Sumatra).
21. *T. cleoboides viga* subsp. n., ♀ allotype (Sumatra).
22. *T. donatana donatana* Nic., ♀.
23. *Pratapa queda* Cbt., ♂.
24. *P. queda* Cbt., ♀.

Unless stated otherwise, all are specimens of Malayan origin. The figures are slightly reduced in size.

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A. S. Corbet. Revision of **Tajuria.**